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TO: Mr. Dean Henderson, Owner
Kids Kountry Preschool
4620 Taft Highway
Bakersfield, CA 93313

**CITATION FOR NONCOMPLIANCE -- Water System No. 1503256
TOTAL COLIFORM MCL VIOLATION -- JULY 2013
Citation No. 03-19-13C-044**

STATEMENT OF FACTS

Kids Kountry Preschool Water System (hereinafter Water System) is classified as a nontransient noncommunity water system and serves a population of approximately sixty eight (68) persons through two (2) service connections. One service connection is for the preschool and the other is for a residence. The Water System has one (1) active source of supply, Well 01 (PS Code: 1503256-001), and one pressure tank that was installed in 2012, to replace an old 300-gallon pressure tank. Exact capacity of the new pressure tank is unknown. It is estimated to be about 1,500-gallons. The well is located on the residential property and is shared by the preschool and the resident. No routine chlorination treatment was provided when the Water System experienced bacteriological quality problems in July 2013. In view of the multiple total coliform violations in 2012 and 2013, the Water System was directed to install continuous chlorination treatment at the well (Citation #03-19-13C-023, issued on August 28,

1 2013). Continuous chlorination treatment at Well 01 was installed during the last
2 week of September 2013, and it began operating on October 4, 2013. As a long-term
3 solution, the Water System also has the option of connecting to the City of
4 Bakersfield's domestic water supply system. The City's pipeline is less than 1,000
5 feet away from the Water System's service area. If the Water System connects to the
6 City of Bakersfield and no longer uses Well 01 for domestic supply, the Department
7 will inactivate the Water System.

8
9 The Water System operates under the authority of a domestic water supply permit No.
10 03-12-95P-036, issued on October 25, 1995, by the California Department of Health
11 Services (now California Department of Public Health). The Department will issue a
12 new domestic water supply permit after receiving a permit amendment application,
13 due to the recent installation of the chlorination treatment at the well.

14
15 The Southern California Drinking Water Field Operations Branch, Division of
16 Drinking Water and Environmental Management, California Department of Public
17 Health (hereinafter "Department") is responsible for enforcing the Safe Drinking
18 Water Act and regulations promulgated pursuant thereto.

- 19
20
- 21 • The Water System is required to collect one (1) routine bacteriological sample
22 per month. Please refer to the Water System's approved Bacteriological
23 Sample Siting Plan (BSSP) or Table 64423-A.
 - 24 • One (1) routine bacteriological sample collected on July 24, 2013, from the
25 distribution system, tested positive for total coliform bacteria.
 - 26 • Five (5) repeat samples collected on July 26, 2013, from the distribution
27 system, Well 01, and pressure tank, also tested positive for total coliform
bacteria. **The Water System failed the total coliform maximum**

1 contaminant level (MCL) for the month of July 2013 [Section
2 64426.1(b)(2), *Authorities*].

- 3 • On July 29, 2013, Raymond Kincaid, the then Water System's contract sampler
4 and certified distribution operator, notified the Department that the Water
5 System failed the total coliform MCL for July 2013.
- 6 • None of the samples collected in July 2013, from the distribution system or
7 Well 01, tested positive for *E. coli* bacteria.
- 8 • On August 20, 2013, a public notice and Proof of Notification were emailed to
9 the Water System, for the July 2013 total coliform MCL failure.
- 10 • On August 28, 2013, the Department received signed and dated copies of the
11 public notice and Proof of Notification from the Water System. According to
12 these documents, public notification was completed on August 25, 2013.
- 13 • On August 20, 2013, a blank investigation report form was emailed to the
14 Water System, for the July 2013 total coliform MCL failure.
- 15 • On August 29, 2013, the Department received a completed investigation report
16 for the July 2013 total coliform MCL failure. The investigation report was
17 completed by Mr. Kincaid, on behalf of the Water System. According to the
18 investigation report, the possible causes of contamination were over-
19 chlorination of the well by the resident who shares the well with the Water
20 System and/or a faulty check valve in-between the well and the pressure tank.
- 21 • To help clear bacteriological contamination in July 2013, the Water System
22 provided flushing of Well 01 and the distribution system on or near July 25,
23 2013.
- 24 • During the week of July 29, 2013, the check valve on the well discharge line
25 was replaced since it was suspected that the check valve was leaking, allowing
26 the water to backflow into the well casing. The well was then disinfected and
27 flushed.

- 1 • Two (2) investigative samples collected on July 30, 2013, from Well 01 and
2 the distribution system tested negative for total coliform bacteria. One (1)
3 investigative sample collected on the same day from the pressure tank tested
4 positive for total coliform bacteria.
- 5 • The pressure tank was disinfected again, on or near August 1, 2013, and
6 flushed to clear bacteriological contamination.
- 7 • One (1) investigative sample collected on August 5, 2013 from the pressure
8 tank, tested negative for total coliform bacteria.
- 9 • Due to repeated total coliform MCL violations in 2012 and 2013, on April 16,
10 2013, the Department directed the Water System to install mandatory
11 continuous chlorination treatment at the wellhead, before May 31, 2013.
- 12 • On August 20, 2013, the Department again directed the Water System to install
13 continuous chlorination treatment, before collecting routine bacteriological
14 quality samples in September 2013.
- 15 • Five (5) routine bacteriological samples collected from the distribution system
16 on August 21, 2013, tested negative for total coliform bacteria.
- 17 • On August 22, 2013, the Department staff met with Dean Henderson,
18 Raymond Kincy and Raul Rubio (resident) to discuss seriousness of the
19 violations and actions that the Water System needed to take, to comply with
20 the directives of the Department.
- 21 • On August 28, 2013, the Department issued Citation #03-19-13C-023 to the
22 Water System for multiple total coliform MCL violations in 2012 and 2013.
23 The citation directed the Water System to install continuous chlorination by
24 September 30, 2013, in addition to other directives.
- 25 • On September 18, 2013, Dean Henderson from the Water System contacted the
26 Department and discussed plans to install a continuous chlorination treatment
27 system at the well, during the week of September 23, 2013.

- 1 • With the assistance of McMor Chlorination, Inc., the Water System installed
- 2 the continuous chlorination treatment in late September 2013, but the treatment
- 3 was not functional due to the pending electrical work.
- 4 • One (1) routine bacteriological sample collected on September 30, 2013, from
- 5 the distribution system, tested negative for total coliform bacteria.
- 6 • Results of all bacteriological samples collected from January 2012 to
- 7 September 30, 2013 are summarized in **Attachment A**.
- 8 • After completion of the electrical work, the chlorination treatment began
- 9 operating on October 4, 2013. Certified operators from McMor Chlorination,
- 10 Inc. are on contract to operate and supervise the chlorination treatment facility.
- 11 • The Water System is required to submit a permit amendment application to the
- 12 Department, due to addition of the chlorination treatment. The Water System
- 13 will be also required to prepare and submit an operations plan for the
- 14 chlorination treatment

15 **AUTHORITIES**

16 **Section 116577 of the CHSC**, states in relevant part:

17 “(a) Each public water system shall reimburse the department for the actual costs incurred by the

18 department for any of the following enforcement activities related to that water system:

- 19 (1) Preparing, issuing, and monitoring compliance with, an order or citation.
- 20 (2) Preparing, and issuing public notification

21 (b) The department shall submit an invoice for these enforcement costs to the public water system

22 that requires payment prior to September 1 of the fiscal year following the fiscal year in which the costs

23 were incurred. The invoice shall indicate the total hours expended, the reasons for the expenditure, and

24 the hourly cost rate of the department. The costs set forth in the invoice shall not exceed the total actual

25 costs to the department of the enforcement activities specified in this section.”...

26 **Section 116650 of the California Health and Safety Code** (hereinafter CHSC), states in relevant part:

27 “(a) If the department determines that a public water system is in violation of this chapter or any

regulation, permit, standard, or order issued or adopted thereunder, the department may issue a citation

to the public water system. The citation shall be served upon the public water system personally or by

registered mail.

(b) Each citation shall be in writing and shall describe with particularity the nature of the violation,

including a reference to the statutory provision, standard, order, or regulation alleged to have been

violated.

(c) For continuing violations, the citation shall fix the earliest feasible time for elimination or

correction of the condition constituting the violation where appropriate. If the public water system fails

to correct a violation within the time specified in the citation, the department may assess a civil penalty as specified in subdivision (e).

(d) For a noncontinuing violation of primary drinking standards, the department may assess in the citation a civil penalty as specified in subdivision (e).

(e) Citations issued pursuant to this section shall be classified according to the nature of the violation or the failure to comply. The department shall specify the classification in the citation and may assess civil penalties for each classification as follows:

(1) For violation of a primary drinking standard, an amount not to exceed one thousand dollars (\$1,000) per day for each day that the violation occurred, including each day that the violation continues beyond the date specified for correction in the citation or order.

(2) For failure to comply with any citation or order issued for violation of a secondary drinking water standard that the director determines may have a direct or immediate relationship to the welfare of the users, an amount not to exceed one thousand dollars (\$1,000) for each day that the violation continues beyond the date specified for correction in the citation or order.

(3) For failure to comply with any citation or order issued for noncompliance with any department regulation or order, other than a primary or secondary drinking water standard, an amount not to exceed two hundred dollars (\$200) per day for each day the violation continues beyond the date specified for correction in the citation."

Section 116655 of the CHSC, states in relevant part:

"(a) Whenever the department determines that any person has violated or is violating this chapter, or any permit, regulation, or standard issued or adopted pursuant to this chapter, the director may issue an order doing any of the following:

(1) Directing compliance forthwith.

(2) Directing compliance in accordance with a time schedule set by the department.

(3) Directing that appropriate preventative action be taken in the case of a threatened violation.

(b) An order issued pursuant to this section may include, but shall not be limited to, any or all of the following requirements:

(2) That purification or treatment works be installed."

CCR, Title 22, Section 64426.1 establishes the total coliform maximum contaminant level and states in relevant part:

"(a) Results of all samples collected in a calendar month pursuant to Sections 64423, 64424, and 64425 that are not invalidated by the Department or the laboratory shall be included in determining compliance with the total coliform MCL. Special purpose samples such as those listed in 64421(b) and samples collected by the water supplier during special investigations shall not be used to determine compliance with the total coliform MCL.

(b) A public water system is in violation of the total coliform MCL when any of the following occurs:

(1) For a public water system which collects at least 40 samples per month, more than 5.0 percent of the samples collected during any month are total coliform-positive; or

(2) For a public water system with collects fewer than 40 samples per month, more than one sample collected during any month is total coliform-positive; or

(3) Any repeat sample is fecal coliform-positive or E. coli-positive; or

(4) Any repeat sample following a fecal coliform-positive or E. coli-positive routine sample is total coliform-positive.

(c) If a public water system is not in compliance with paragraphs (b)(1) through (4), during any month in which it supplies water to the public, the water supplier shall notify the Department by the end of the business day on which this is determined, unless the determination occurs after the Department office is closed, in which case the supplier shall notify the Department within 24 hours of the determination. The water supplier shall also notify the consumers served by the water system. A Tier 2 Public Notice shall be given for violations of paragraphs (b)(1) or (2), pursuant to section 64463.4. A Tier 1 Public Notice shall be given for violations of paragraphs (b)(3) or (4), pursuant to section 64463.1."

DETERMINATIONS

Based upon the above Statement of Facts and Authorities, the Department determines that the Kids Kountry Preschool Water System has violated the following:

1. CCR, Title 22, Section 64426.1(b)(2): Specifically, the Water System violated the total coliform MCL for July 2013, when more than one sample collected from the Water System, tested positive for total coliform bacteria.

The above violation is classified as a non-continuing violation.

DIRECTIVES

Kids Kountry Preschool Water System is hereby directed to take the following actions:

1. Cease and desist from failing to comply with Section 116555(a) of the California Health and Safety Code (CHSC) and Section 64426.1(b)(2), of Title 22, California Code of Regulations (CCR).
2. In the future, prior to making any repairs to domestic water supply facilities, the Water System shall notify its certified distribution operator, and ensure proper disinfection and follow-up bacteriological sampling in accordance with the applicable American Water Works Association (AWWA) standard(s).
3. **All water produced by Well 01 shall receive continuous chlorination treatment.** Continuous chlorination equipment shall also be installed on the discharge of any other new source added to the Water System in the future. Detectable chlorine residual shall be maintained in all areas of the distribution system at all times. The chlorination equipment shall be capable of providing a chlorine dosage of at least 2.0 mg/L. Information regarding the permanent

1 chlorination equipment and installation procedures shall be submitted to the
2 Department for review and approval. The installation shall be conducted by a
3 person qualified and experienced with chlorination equipment.

- 4 4. By **October 31, 2013**, the Water System shall submit a completed permit
5 amendment application (blank form provided under **Attachment B**) for
6 addition of chlorination treatment. The permit amendment application shall
7 also include a fee of \$258.00 (payable to the Department in the form of a
8 check), and chlorination data sheet (blank data sheet provided under
9 **Attachment C**). At the time of submittal of the permit amendment
10 application, the Water System shall also submit an operations and maintenance
11 plan for the chlorination treatment. A template for the operations plan is
12 provided under **Attachment D**.
- 13 5. The Water System shall have on staff or under contract a minimum of a D1
14 Certified Distribution Operator to operate the chlorination equipment.
15 Documentation of the certification of the operator shall be provided to the
16 Department by **October 31, 2013**. The operator shall visit the well site and
17 review the chlorination treatment on at least a weekly basis and document the
18 date and time of the visit, the settings on the chemical feed equipment, the
19 chlorine stock on hand and the chlorine residual at the well site and in the
20 farthest part of the distribution system. Documentation of the site visits shall
21 be submitted to the Department by the 10th day of the following month.
- 22 6. The chlorine residual must be measured and reported at the same time and
23 location(s) that the bacteriological sample(s) are collected. The residual(s)
24 should be provided to the Department along with the bacteriological laboratory
25 analyses.
- 26 7. The Water System shall monitor the distribution system for disinfection
27 byproducts (DBPs): total trihalomethanes (TTHMs) and halo acetic acids 5

(HAA5) in accordance with Chapter 15.5, Title 22, CCR. DBP sampling (consisting of one sample) shall be conducted during the summer months of 2014, before **September 30, 2014, from a location representing the maximum residence time in the distribution system.**

8. Before **October 31, 2013**, the Water System shall submit a Stage 2 DBP Monitoring Plan. A template for preparing the Stage 2 DBP Monitoring Plan is provided under **Attachment E**.
9. The Water System shall initiate monthly sampling of the raw well (Well 01) water for total coliform bacteria. The sample must be collected at a location ahead of chlorination and shall be analyzed for total and fecal coliform or *E.coli* bacteria, using a density analytical method with the analytical results reported in MPN/100 ml. The results of all samples shall be submitted to the Department by the 10th day of the following month. After six consecutive monthly samples from the well that do not show the presence of coliform bacteria, the Water System may submit a written request to the Department for a reduction in sampling to one sample per quarter from the well.
10. The Water System must notify the Department within five business days of the date of service of this Citation if the deadlines established by this Citation will not be met and explain, in writing, the reason(s) for delay(s).
11. The Water System shall reimburse the Department, in accordance with an invoice that shall be provided to the Water System, the costs for enforcement activities, and such reimbursement shall be made prior to September 1 (or by a different date if specified by the Department) of the fiscal year following the fiscal year in which such costs are incurred as described in CHSC Section 116577(a)(1-2) and 116577(b).

1 12. Any document requested by the citation shall be submitted to the following
2 address:

3 Jaswinder S. Dhaliwal, P.E., Senior Sanitary Engineer
4 Department of Public Health
5 Southern California Branch
6 Drinking Water Field Operations
7 4925 Commerce Drive, Suite 120
8 Bakersfield, CA 93309
9 Phone: (661) 335-7315
10 Fax: (661) 335-7316

11 **FURTHER ENFORCEMENT ACTIONS**

12 Section 116270, Division 104, Part 12, Chapter 4 of the CHSC authorizes the
13 Department to: issue additional citations with assessment of penalties if the public
14 water system continues to fail to correct a violation identified in a citation; take action
15 to suspend or revoke a permit that has been issued to a public water system if the
16 system has violated applicable law or regulations or has failed to comply with orders
17 of the Department; and petition the superior court to take various enforcement
18 measures against a public water system that has failed to comply with orders of the
19 Department. The Department does not waive any further enforcement action by
20 issuance of this citation.

21 **PARTIES BOUND**

22 This citation shall apply to and be binding upon Kids Kountry Preschool Water
23 System, its officers, directors, agents, employees, contractors, successors, and
24 assignees.
25
26
27

SEVERABILITY

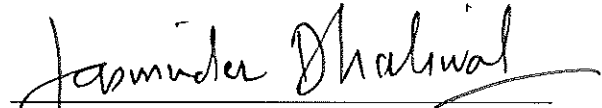
The directives of this citation are severable, and Kids Kountry Preschool Water System shall comply with each and every provision thereof, notwithstanding the effectiveness of any other provision.

CIVIL PENALTY

Section 116650, subsection (d) and (e) of the CHSC allow for the assessment of a civil penalty for the failure to comply with the requirements of the Safe Drinking Water Act. Failure to comply with any Directive of this Citation may result in the Department imposing an administrative penalty of not less than \$200 (two hundred dollars) for each day that the violation continues beyond the date set for correction in this Citation.

The Department does not waive any further enforcement action by issuance of this citation, and expressly reserves the right to issue a citation with penalties for the violations on which the Directives of this citation are based.

October 8, 2013
Date


Jaswinder S. Dhaliwal, P.E.
Senior Sanitary Engineer
Tehachapi District
SOUTHERN CALIFORNIA BRANCH
DRINKING WATER FIELD OPERATIONS

Attachments:

Attachment A: Bacteriological Summary January 2012 through September 2013
Attachment B: Permit Amendment Application Form
Attachment C: Blank Chlorination Data Sheet
Attachment D: Template for Operations Plan for Chlorination Treatment
Attachment E: Template for Stage 2 DBP Monitoring Plan

cc: Kern County Environmental Health Services Department (w/o attachments)
McMor Chlorination, Inc., Contract Sampler (via email)

JD/dc

Attachment A

Kidz Kountry Preschool

1503256

Distribution System Freq: 1/M

<i>Sample Date</i>	<i>Time</i>	<i>Location</i>	<i>T Coll</i>	<i>E Coll</i>	<i>F Coll</i>	<i>Type</i>	<i>Cl2</i>	<i>Violation</i>	<i>Comment</i>
1/31/2012	11:40	Front HB	A	A		Routine			
2/28/2012	10:45	Front HB	A	A		Routine			
3/14/2012	12:55	Back East (HB)	P	A		Routine			
3/16/2012	9:57	Between Bathroo	A	A		Repeat			
3/16/2012	10:03	Back East (HB)	A	A		Repeat			
3/16/2012	10:10	Back West (HB) D	A	A		Repeat			
3/16/2012	10:15	NE HB	A	A		Repeat			
4/24/2012	13:05	NE HB	A	A		Routine			
4/24/2012	13:10	Front HB	A	A		Routine			
4/24/2012	13:15	HB Between Bathr	A	A		Routine			
4/24/2012	13:20	Back West HB	A	A		Routine			
4/24/2012	13:25	Back East HB	A	A		Routine			
5/15/2012	12:10	Front Hb	A	A		Routine			
6/25/2012	12:42	HB Between Bathr	P	A		Routine			
6/27/2012	12:55	NE HB	A	A		Repeat			
6/27/2012	13:00	Front HB (Upstrea	A	A		Repeat			
6/27/2012	13:05	HB Between Bathr	A	A		Repeat			
6/27/2012	13:10	Back (HB) Downst	A	A		Routine			
7/24/2012	13:15	NE (HB)	P	A		Routine			
7/24/2012	13:20	Front (HB)	P	A		Routine		MCL	Citation 03-19-13C-023 issued.
7/24/2012	13:25	Back West (HB)	P	A		Routine			
7/24/2012	13:30	Back East (HB)	P	A		Routine			
7/24/2012	13:35	(HB) Between Bat	P	A		Routine			
8/1/2012	15:22	Front (HB)	A	A		Other			
8/14/2012	9:20	NE (HB)	P	A		Routine			
8/14/2012	9:25	Front (HB)	A	A		Routine			
8/14/2012	9:30	Back West (HB)	A	A		Routine			
8/14/2012	9:35	Between Bathroo	A	A		Routine			
8/14/2012	9:40	Back East (HB)	A	A		Routine			
8/16/2012	9:15	NE (HB) Site	A	A		Repeat			
8/16/2012	9:20	Front (HB) Downst	A	A		Repeat			
9/19/2012	14:30	NE (HB)	A	A		Routine			
9/19/2012	14:35	Front (HB)	P	A		Routine			
9/19/2012	14:40	Back East (HB)	A	A		Routine			
9/19/2012	14:45	Between Bathroo	A	A		Routine			

<i>Sample Date</i>	<i>Time</i>	<i>Location</i>	<i>T Coli</i>	<i>E Coli</i>	<i>F Coli</i>	<i>Type</i>	<i>CI2</i>	<i>Violation</i>	<i>Comment</i>
9/19/2012	14:50	Back West (HB)	P	A		Routine		MCL	Citation 03-19-13C-023 issued.
9/26/2012	14:40	NE (HB)	A	A		Other			
9/26/2012	14:42	Front (HB)	A	A		Other			
9/26/2012	14:45	Back West (HB)	A	A		Other			
10/3/2012	12:10	Front (HB)	A	A		Routine			
10/3/2012	12:15	NE (HB)	A	A		Routine			
10/3/2012	12:20	Back East (HB)	P	A		Routine			
10/3/2012	12:25	Between Bathroo	A	A		Routine			
10/3/2012	12:30	Back West (HB)	A	A		Routine			
10/5/2012	10:30	NE (HB) Upstream	P	A		Repeat			
10/5/2012	10:35	Back East (HB) Sit	P	A		Repeat		MCL	Citation 03-19-13C-023 issued.
10/5/2012	10:40	Back West (HB) D	P	A		Repeat			
11/13/2012	14:50	NE (HB)	A	A		Other			
11/13/2012	14:55	Front (HB)	A	A		Other			
11/13/2012	15:00	Back West (HB)	A	A		Other			
11/15/2012	14:10	NE (HB)	A	A		Routine			
11/15/2012	14:15	Front (HB)	A	A		Routine			
11/15/2012	14:20	Back East (HB)	A	A		Routine			
11/15/2012	14:25	Between Bathroo	A	A		Routine			
11/15/2012	14:30	Back West (HB)	A	A		Routine			
12/4/2012	14:50	NE (HB)	A	A		Routine			
1/22/2013	10:05	NE (HB)	A	A		Routine			
2/8/2013	11:20	Front (HB)	A	A		Routine			
3/12/2013	14:45	Between Bathroo	P	A		Routine		MCL	Citation 03-19-13C-023 issued.
3/14/2013	12:40	NE Upstream	A	A		Repeat			
3/14/2013	12:45	Between Bathroo	A	A		Repeat			
3/14/2013	12:50	Back West (HB) D	A	A		Repeat			
4/10/2013	14:15	Front (HB)	A	A		Routine			
4/10/2013	14:20	NE (HB)	A	A		Routine			
4/10/2013	14:25	Back East (HB)	A	A		Routine			
4/10/2013	14:30	Between Bathroo	A	A		Routine			
4/10/2013	14:35	Back West (HB)	A	A		Routine			
5/15/2013	13:30	Front (HB)	A	A		Routine			
6/18/2013	10:05	Between Bathroo	A	A		Routine			
7/24/2013	14:25	NE (HB)	P	A		Routine			
7/26/2013	10:33	Tank, Investigative	3.6	<1.1		Other			
7/26/2013	10:38	Front (HB) Upstre	P	A		Repeat		MCL	Cit 03-19-13C-044 Issued

<i>Sample Date</i>	<i>Time</i>	<i>Location</i>	<i>T Coli</i>	<i>E Coli</i>	<i>F Coli</i>	<i>Type</i>	<i>Cl2</i>	<i>Violation</i>	<i>Comment</i>
7/26/2013	10:45	NE (HB) Site	P	A		Repeat			
7/26/2013	10:50	Between Bathroo	P	A		Repeat			
7/30/2013	11:38	Tank, Investigative	P	A		Other			
7/30/2013	11:40	NE (HB)	<1.1	<1.1		Other			
8/5/2013	13:31	Tank, Investigative	<1.1	<1.1		Other			
8/21/2013	11:05	NE (HB)	A	A		Routine			
8/21/2013	11:10	Front (HB)	A	A		Routine			
8/21/2013	11:15	Back East (HB)	A	A		Routine			
8/21/2013	11:20	Between Bathroo	A	A		Routine			
8/21/2013	11:25	Back West	A	A		Routine			
9/30/2013	13:24	(HB) North/West	A	A		Routine			

Kidz Kountry Preschool

1503256

Source Monitoring Freq:

<i>Sample Date</i>	<i>Time</i>	<i>Source</i>	<i>T Coll</i>	<i>E Coll</i>	<i>F Coll</i>	<i>Violation</i>	<i>Comment</i>
7/26/2012	9:50	Water Well & Tank	2.2	<1.1			
7/26/2012	9:55	Water Well & Tank	<1.1	<1.1			
8/1/2012	15:07	Tank	<1.1	<1.1			
8/1/2012	15:15	Tank & Well	<1.1	<1.1			
8/7/2012	10:19	Well, 1- min	<1.1	<1.1			
8/7/2012	10:21	Well, 3-min	<1.1	<1.1			
8/7/2012	10:23	Well, 5- min	<1.1	<1.1			
8/7/2012	10:33	Well, 15- min	<1.1	<1.1			
8/7/2012	10:48	Well, 30- min	<1.1	<1.1			
8/16/2012	9:25	Tank, Upstream	<1.1	<1.1			Repeat
8/16/2012	9:30	Well	<1.1	<1.1			
9/21/2012	11:25	Well	<1.1	<1.1			
9/21/2012	11:30	Tank	<1.1	<1.1			
10/5/2012	10:20	Well	<1.1	<1.1			
10/9/2012	11:36	Tank	<1.1	<1.1			
10/9/2012	18:00	Tank	<1.1	<1.1			
10/10/2012	5:50	Tank	<1.1	<1.1			
3/14/2013	12:30	Tank	<1.1	<1.1			
3/14/2013	12:35	Well Repeat	1.1	<1.1			
3/28/2013	12:42	Well	<1.1	<1.1			
3/28/2013	12:43	Tank	<1.1	<1.1			
3/28/2013	12:44	Well	<1.1	<1.1			
7/26/2013	10:30	Well, Investigative	5.1	<1.1			
7/30/2013	11:35	Well, Investigative	<1.1	<1.1			

Attachment B

STATE OF CALIFORNIA
APPLICATION
FOR
DOMESTIC WATER SUPPLY PERMIT AMENDMENT
FROM

Applicant: _____
(Enter the name of legal owner, person(s) or organization)

Address: _____

System Name: _____

System Number: _____

TO: Department of Public Health
Drinking Water Field Operations Branch
Southern California Branch
Drinking Water Field Operations
Tehachapi District Office
4925 Commerce Drive, Suite 120
Bakersfield, California, 93309



Pursuant and subject to the requirements of the California Health and Safety Code, Division 104, Part 12, Chapter 4 (California Safe Drinking Water Act), Article 7, Section 116550, relating to changes requiring an amended permit, application is hereby made to amend an existing water supply permit to _____

(Applicant must state specifically what is being applied for - whether to construct

new works, make alterations or additions in works or sources, or change or modify treatment.)

I (We) declare under penalty of perjury that the statements on this application and on the accompanying attachments are correct to my (our) knowledge and that I (we) are acting under authority and direction of the responsible legal entity under whose name this application is made.

By: _____

Title: _____

Address: _____

Telephone: _____

Dated: _____

DDW 09/2007

Attachment C

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER

CHLORINATION DATA

System Name: _____ System No.: _____
Source of Information: _____
Collected by: _____ Date: _____

Reason for chlorination (emergency, mandatory or optional):	
Water Source:	
Water treated (raw/filtered etc.):	
Chlorine demand character:	
Dosage:	
Point of application:	
Mixing:	
Contact time before use:	
Contact time for residual test:	
Water Flow: Variation:	
How measured:	
Equipment: Type:	
Make:	
Model:	
Capacity:	
Condition:	
Automatic switchover capability?	
Portable emergency chlorinator available?	
Chlorine residual monitored continuously?	
Low level residual alarm?	
At what level of chlorine residual is the alarm activated?	
How often are residual analyses conducted?	
Type of residual measured (free or combined):	
Type of residual test used:	
Chemical added: (% available chlorine, form):	
Cylinder or crock capacity:	
Stock on hand/days supply:	
Housing and Safety Features: Housing:	
Insulation:	
Heating:	
Locks:	
Lighting:	
Ventilation:	
Leak detector with alarm:	
Switches outside chlorination room:	
Gas mask:	
Is an emergency plan of action posted?	
Operation and maintenance: Lapse during changes:	
Ability to make repairs:	
How often is the equipment inspected?	
Operations records kept:	
Condition of scales:	
Remarks and Deficiencies:	

Attachment D

CHLORINATION TREATMENT OPERATIONS PLAN (GROUNDWATER SOURCE)

Date of Plan: _____

Water System Name: _____ System No.: _____

Name of Treatment Facility: _____

Brief description of water system, number of service connections and population served, source (date of drilling, depth, perforations, pump setting), storage (capacity and material), chlorinator treatment unit (type of chlorinator pump, capacity of pump, manufacturer and model, and size of the chlorine solution storage tank):

Inspection: A certified water distribution/treatment operator conducts inspection of the treatment facility(ies) which consists of visual inspection of the equipment, checking and filling the chlorine solution vessel, measuring the chlorine residual, adjusting the equipment, calculating the dosage rate and writing down the results of the inspection as explained below.

- A. Visual inspection of **CHLORINATOR PUMP** and disinfection reservoir (**WEEKLY**).
 - 1. Inspect the pump for proper operation.
 - 2. Inspect the disinfectant in the reservoir for concentration and adequate volume for the operational period (record results).
 - 3. Determine if there is enough disinfectant on hand for one or more weeks.

- B. Measure the **DISINFECTANT RESIDUAL** in the distribution system (approved free chlorine test kit required).
 - 1. Record the results (**WEEKLY**, on the attached sheet).
 - 2. Determine if an adequate level of disinfectant is maintained.
 - a. If disinfectant level is low, determine the reason and correct.
 - b. If no measurable disinfectant, notify owner, determine reason, and remedy. If no disinfectant for 24 hours, notify Department.

Responding to failures or interruptions: Failure or interruption of chlorination treatment will be handled in accordance with the attached written procedure. This procedure will include prompt correction of the problem and restoration of the chlorine residual. The availability of a replacement or back-up chemical feed system will be addressed.

Record Keeping: The record keeping requirements are shown on the attached forms. These forms or their equivalent will be used to maintain the following records:

1. Date and time of inspection, name of operator
2. Chlorine residual and location of residual measurement
3. Production records
4. Operational notes including weekly calculation of chemical dosage (see attached form)
5. Chlorination failure log
6. Maintenance performed (both preventative and unscheduled maintenance)

Operator Certification

Name of the Person Preparing the Operations Plan: _____

Signature of the Person: _____ Date: _____

Attachments - Forms for calculating dosages, chlorination failure plan, and monitoring

Calculating Chemical Dosages

The calculation of chemical dosages is important in order to track the effectiveness of the chemical feed process. To calculate the chemical dosage over a specific period of time, you need to know:

1. Quantity of water produced (gallons)
2. Amount of solution injected (gallons)
3. Percent of available chlorine in liquid hypochlorite (usually 5.25% or 12.5%)
4. Number of gallons of liquid hypochlorite used to make the solution.
5. Number of gallons of solution made with one gallon of the liquid hypochlorite. For example, if one gallon of liquid hypochlorite were added to 24 gallons of water, the final mixture would contain 25 gallons of solution.

The dosage is calculated by plugging these numbers into the following formula.

NOTE: "X" means multiply!

$$\text{Dosage} = \frac{10,000 \times (\text{Amount of solution injected}) \times (\text{Percent of available chlorine})}{(\text{Quantity of water produced}) \times (\text{Gallons of solution made with one gallon of hypochlorite})}$$

Example: Over a seven-day period, a system produced 40,000 gallons of water. During that time period, the system used 30 gallons of solution. When mixing up the solution, the operator mixes one gallon of chlorine with 24 gallons of water to make 25 gallons of solution. The strength of the liquid chlorine solution is 12.5 %. The following is a calculation of the dosage:

$$\text{Dosage} = \frac{10,000 \times (30) \times (12.5)}{(40,000) \times (25)} = 3.75 \text{ milligrams per liter (mg/L)}$$

Weekly Dosage Calculations

Week 1 - Date _____ Dosage = $\frac{10,000 \times (\quad) \times (\quad)}{(\quad) \times (\quad)} =$

Week 2 - Date _____ Dosage = $\frac{10,000 \times (\quad) \times (\quad)}{(\quad) \times (\quad)} =$

Week 3 - Date _____ Dosage = $\frac{10,000 \times (\quad) \times (\quad)}{(\quad) \times (\quad)} =$

Week 4 - Date _____ Dosage = $\frac{10,000 \times (\quad) \times (\quad)}{(\quad) \times (\quad)} =$

Response to Failures and Interruptions for Hypochlorination Systems

Name of Water System: _____ System Number: _____

In the event the chlorination system is found to be not operating or injecting too little chlorine solution, the following plan of action will be taken to correct the problem or situation. The plan should address the availability of a spare chlorinator, manual feeding of chlorine until the problem is resolved, more frequent chlorine residual monitoring, etc.:

Short-term chlorinator interruption (i.e. less than one day):

Long-term chlorine interruption (i.e. chlorinator cannot be repaired):

Prepared by: _____ Date: _____

Notes: This plan is to be posted at the chlorination station.
This plan is to be reviewed and updated annually.

Chlorination Operational Log

Month and Year _____

System Name _____ Facility Name _____

Maximum Capacity of the Chlorination Pump _____

Were there any malfunctions of the chlorination system this month? Yes _____ No _____

If yes, list the date the malfunction occurred and action taken. Problems that cannot be promptly corrected must be reported to the California Department of Public Health. Bacteriological sampling must be conducted if the safety of the water is in question:

Date	Time	Operator	Chlorine Rate		Crock Level	Meter Reading	Chlorine Residual		Operational Notes
			Speed	Stroke			Injection Pt.	Distribution	
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

1. Operational notes include weekly dosage calculations, addition of solution, changes in feed rate and other pertinent info.
2. This form is to be maintained for each chlorination facility.
3. This form is to be kept on file for review by the Department.

Chlorine Residual Report

System Name: _____ Month: _____
System Number: _____ Year: _____

Day	Sampling Address	Residual
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
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19		
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22		
23		
24		
25		
26		
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30		
31		

Attachment E

Stage II Disinfectants/Disinfection Byproduct Rule Monitoring Plan Form

TTHM MCL = 0.080 mg/l HAA5 MCL = 0.060 mg/l

System Name: _____ System No. _____
No. of Monitoring Locations: _____ Population: _____ No. of pressure zones: _____
Source Type: (Circle all that apply): Groundwater Surface Water Both

(The following information may be attached in a separate table or sheet if necessary.)

A map of the distribution system must be attached to include all the facilities mentioned below and DBP sample location(s) is required. A picture of the DBP monitoring location(s) is optional.

TTHM/HAA5 Monitoring Frequency

Location 1, PS Code: _____
Frequency: Routine _____ Increased _____ Reduced _____
Sample Location Description (Address, Building No., Source, etc.): _____
Sample Date (Month): _____

Location 2, PS Code: _____
Frequency: Routine _____ Increased _____ Reduced _____
Sample Location Description (Address, Building No., Source, etc.): _____
Sample Date (Month): _____

Calculating MCL Compliance (Check the compliance that applies):

- _____ Compliance will be based on concentration of an annual sample result per sample location.
- _____ Compliance will be based on the running annual average of quarterly sample results per sample location.
- _____ Formula for calculating compliance is attached (if not using either of the above).

(If there are more monitoring locations attach on an additional sheet.)

Disinfectant Residual Monitoring (Free Chlorine Residual)

Sample Location & Frequency: Same time and location as coliform bacteriological monitoring sample(s). See system Bacteriological Sample Siting Plan. The maximum residual disinfectant level (MRDL) = 4 mg/L.

Source Name(s), Location(s) and, if applicable, Seasonal Variability of Use:

Treatment Plant Facilities (Includes each chlorinator and its injection point): _____

Treatment Plant Location(s): _____

Storage Tank(s) Identification & Location: _____

Signature _____

Date _____